



[CASE REPORT]

Adderall-induced Trichotillomania: A Case Report

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ABSTRACT

Adderall (dextroamphetamine/amphetamine) is a psychostimulant medication approved by the United States Food and Drug Administration for the treatment of attention deficit hyperactivity disorder. This medication is usually well tolerated with minimal side effects. We report a case of a 12-year-old girl who was prescribed Adderall by her primary care physician to treat her attention deficit hyperactivity disorder and who subsequently developed trichotillomania. A short time following the initiation of the medication, the patient's family members noticed the patient displaying unusual hair-pulling behavior. The patient was referred to a psychiatrist for an evaluation of trichotillomania. Following a thorough evaluation, the decision was made to discontinue the Adderall and switch the patient to guanfacine. The urge to pull her hair along with her anxiety dissipated following this change. Close follow-up was maintained for over a year with both the psychiatrist and the primary care physician, and during this time the patient did not display any unusual hair pulling behaviors. This case appears to display a very unusual side effect of Adderall.

INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is a common childhood disorder that frequently persists into adulthood. Our ability to diagnose and treat ADHD has increased in recent years due to the application of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision (DSM IV-TR)* criteria and other improved diagnostic scales.¹ The estimated prevalence of ADHD is 8 to 10 percent in school-aged children.^{2–4} Multiple, randomized, control trials have demonstrated the efficacy of stimulant medications for the treatment of ADHD across all age groups.⁵ Adderall (dextroamphetamine/amphetamine) is a psychostimulant medication, approved by United States Food and Drug Administration (FDA) for the treatment of ADHD. It is usually well tolerated but has some psychiatric and neurocognitive side effects. Some of these side effects include loss of appetite, insomnia, abdominal pain, weight loss, headache, nausea, anxiety, and nervousness. Along with some of the common side effects, Adderall has been reported to cause some rare neuropsychiatric side effects, including mood changes, aggressive behaviors, and worsening irritability. We report an interesting

case of a 12-year-old girl who developed trichotillomania after being prescribed Adderall for her ADHD. To the best of our knowledge, this is the first reported case of Adderall-induced trichotillomania.

CASE REPORT

Our patient was a 12-year-old girl who was diagnosed with ADHD due to symptoms of inattention and hyperactivity by her primary care physician. She was started on Adderall XR 10mg orally daily. Soon after starting the Adderall, the patient's parents noticed hair pulling behavior by the patient. The patient reported that she felt anxious, and the hair pulling relieved her anxiety. She was pulling hair mainly from the scalp in the frontal region. The patient was brought back to the primary care physician who, on examination, noticed significant hair loss from the frontal and temporal region. No other abnormality on physical examination was noticed and the baseline lab workup was within normal limits. The patient was then referred to the psychiatrist for further evaluation and management of trichotillomania. Upon psychiatric evaluation, the patient met criteria for ADHD, combined type. On psychiatric review of systems, no symptoms suggesting obsessive compulsive disorder (OCD), posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), mania, hypomania, or depression were reported. No history of any trauma or physical, emotional, or sexual abuse was reported. There was strong suspicion that this hair pulling behavior was induced by Adderall, since no such behaviors were reported in the past and the hair pulling started soon after Adderall therapy was initiated. Based on this suspicion, the Adderall was discontinued and the patient was prescribed guanfacine for ADHD symptoms. She was followed up after two weeks. The patient reported a decrease in the symptoms of anxiety and denied any further urges to pull out her hair. Dosing of guanfacine was further adjusted to help symptoms of

inattention, which was still a problem after discontinuation of the stimulant. She was followed up in four weeks later and was stable with no further urge to pull her hair being reported. The patient's hair was also growing on the scalp area. Psychiatric follow-up was maintained for almost one year and the patient did not develop any relapse of hair pulling behaviors after discontinuation of Adderall. The patient was also examined by her primary care physician on a regular basis, and no hair loss from any other area of the body was noticed.

DISCUSSION

Currently the DSM IV-TR lists trichotillomania under the category of impulse control disorders, but some experts think it is more on the anxiety spectrum of disorders.⁶ Previous studies have shown a significant correlation of trichotillomania with ADHD, OCD, tic disorder, and major depression,⁷ higher than expected rates of overlap has been shown with posttraumatic stress disorder.⁸ Our patient was thoroughly screened for OCD, Tics, major depression and PTSD. No symptoms of any of these disorders were reported. Moreover, no previous psychiatric history other than ADHD was reported. No significant family psychiatric history was reported. The fact that symptom onset was soon after the initiation of the medication raised strong suspicion that these symptoms were possibly induced by the medication. The fact that symptoms disappeared after the medication was discontinued and there was no relapses in one year follow-up after discontinuation of medication confirmed the suspicion that the hair pulling behavior was induced by Adderall. Literature search did not reveal any definite potential mechanism that could explain such a rare outcome with Adderall. The lack of re-challenge is a limitation that weakens the possible causal relationship. However, clinicians should be aware that such side effects can potentially happen with the medication and should encourage patients to report any

changes in the behaviors, even if they appear irrelevant to the medication.

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